

### **ANCHORAGE WATER & WASTEWATER UTILITY**

Operations Division 325 East 94th Court Anchorage, Alaska 99515-2111 Telephone: (907) 267-4505



January 6, 1992

Mr. Robert S. Burd, Director Water Division, WD 131 U. S. EPA, Region 10 1200 Sixth Avenue Seattle, Washington 98101



Re: Anchorage Pt. Woronzof Monitoring Program NPDES Permit AK-002255-1
ODES Data Submittal

Dear Mr. Burd:

As required by our NPDES permit, please find enclosed the Pt. Woronzof ODES data for 1991 monitoring year. This submission includes in-plant influent, effluent, and sludge data for the period of October, 1990 through September, 1991. Receiving water data are not included in this submission. The ODES data are encoded on IBM PC-compatible hard diskettes.

Please contact me with any questions or comments regarding this submittal. Thank you.

Sincerely,

Robert LeVar

Water Treatment Superintendent

Operations Division, AWWU

Enclosures

cc w/o encl.: Jan Hastings, ODES Coordinator

Greg Kellogg, Chief, Compliance Section Robert Dolan, Environmental Engineer

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### DESCRIPTION OF INFLUENT/EFFLUENT DATA SUBMITTED TO ODES

Because of the many types and sources of data that may be added to ODES, it is of great value for users to know the goals and techniques of each sampling program. Much of this information, so valuable for interpretation of data, is not inherent in the data itself; it can only be supplied in narrative form. Each data submitter is therefore requested to provide a descriptive overview of the sampling program. The following questions are intended to indicate the important issues which affect a data set's use and it's comparability to other data sets. The information supplied in response to these questions will help all ODES users choose data appropriate for their purposes. Answers for the following questions are requested for each influent/effluent file submitted for addition to ODES. Please attach extra pages, as necessary. If the requested information is available in annual or quarterly monitoring reports, these may also be submitted.

1. If you have utilized the Series identification field to define subsets of your data, please provide a description of the code used and its definition. If more than one Series ID was used, provide information for all codes.

The Series identification field was not used.

2. Please describe the goals of the sampling program.

The objective of influent, effluent, and sludge monitoring is to characterize the nature and concentrations of pollutants in wastewater and treated wastewater, thereby providing data for monitoring plant performance.

3. Please describe the equipment and techniques used for sample collection, in particular, the use of composite and grab samples for particular types of analyses is important to note. Please confirm the frequency and duration of composite sample collection.

24 hour flow composite samples (Sanford Model TC-2 Autosampler) were taken for daily influent and effluent analyses performed by the Point Woronzof laboratory. Beginning 1 January, 1991, a portable autosampler positioned adjacent to the influent line was used for sampling. This unit was replaced by an ISCO Model 3700 FR autosampler near the same location as the portable autosampler on 1 August 1991. Daily sludge analyses were performed on a composite of three grab samples of dewatered sludge taken every 8 hours.

Analyses for the Summer-dry and Summer-wet sampling were performed on composite samples consisting of 48 one-half hour grab samples of influent and effluent water, and composites of 3 grab samples of dewatered sludge taken every 8 hours.

4. How were samples handled during transportation and storage?

Samples were refrigerated prior to shipping. Samples were shipped to analytical laboratories in coolers with ice packs. Chain of custody forms were utilized for all samples. Adherance to holding times was observed.

5. Were field and transport blanks collected and analyzed?

Field sample blanks were not appropriate to the study and were therefore not utilized. Trip blanks were not used.

6. What component of the sample was analyzed, i.e., whole water, dissolved fraction, or suspended particulate? If whole water was fractioned into suspended and dissolved parts, what filter size was used?

Whole water samples were analyzed.

7. Please provide the following information on analytical techniques for each class of chemical compounds. (Please attach on a separate sheet).

Container
Sample Type and Sample Holding Detection
Analyte Size Preparation Preservation Time Range Method Instrumentation Limits

This data is already incorporated in the ODES data set for each chemical compound. For further information please consult Table 3 and Appendices A,B, and E of the Monitoring Program Annual Report.

8. Please provide the following information on the frequency of laboratory quality control checks and provide a copy of the results of any such analyses. (Please attach information on a separate sheet)

No. of No. of No. of Matrix Spike Analytical Standards

Analyte Samples Duplicates Blanks
Number Material Amount Number Material Used

This information may be found in the Quality Assurance Manuals and Statement of Qualifications of the analytical laboratories used in this monitoring program. This material was mailed to Tetra Tech on 11 June 1991. For further information please consult Appendices A, B, and E of the Monitoring Program Annual Report.

9. If results submitted to ODES have been corrected for blanks or recovery response, please describe the manner in which this has been done.

Concentrations of metals, cyanide, total residual chlorine, and oil and grease, monitored monthly by the Point Woronzof laboratory, and some of the metals measured by ToxScan Inc. have been background subtracted (subtraction of method blank).

Blank and recovery response data are contained in sets beginning with the 'Z' record type. 'F' record fields 84-86, 87-89, and 90-92 are used to tie sample data to method blank, surrogate, spike, and duplicate quality assurance data.

- 10. Please describe any features of this data set which may affect its use to generally characterize environmental data.
  - 1) All monthly data, except for metals and cyanide, consists of monthly averages for measurements of all parameters. Values were obtained from the AWWP

Monthly Monitoring Reports. pH is a numerical average of daily values. Metals were measured once monthly on the following dates:

- 11 October 1990
- 13 November 1990
- 10 December 1990
- 16 January 1991
- 18 February 1991
- 17 March 1991
- 6 April 1991
- 6 May 1991
- 3 June 1991
- 12 July 1991
- 12 August 1991
- 16 September 1991
- 2) The December sludge cyanide value is an average of two values taken in December. The cyanide measurement for November was out of range.
- 3) The January effluent cyanide was judged invalid, an extra was run in February.
- 4) The June samples for pesticides, oil and grease, and BTEX run by ToxScan exceeded their holding times, and therefore these parameters were resampled in September.
- Please find attached data sheets from Anametrix, Inc., listing "Tentatively Identified Compounds". Compounds that could be readily given a code in ODES were included in this data submission, and have "ADDED" written beside them, all others were not included in the data set.
- 6) Please also find 2 sheets from ToxScan with metal QA/QC data.
- 11. Please describe the quality assurance/quality control procedures used to verify the correct coding and entry of data.

Monthly monitoring data was double-keypunched and verified. Data for the June, August, and the September resampling of Summer-dry/Summer-wet was double-checked against laboratory data sheets.

12. If any other types of data were collected concurrently which have been or will be added to ODES, please indicate the appropriate ODES file type(s).

File types AN144W and AN009 are forthcoming.

13. In what report or document can the raw data be found? How could an individual obtain a copy of the raw data?

Monitoring Program Annual Report, November 1989 - October 1990, Anchorage Water and Wastewater Utility, Point Woronzof Wastewater Treatment Facility.

Monitoring Program Annual Report, November 1990 - October 1991, Anchorage Water and Wastewater Utility, Point Woronzof Wastewater Treatment Facility.



42 Hangar Way Watsonville, CA 95076 (408) 724-4522 FAX (408) 724-3188

QA\QC FOR PROJECT # 7929 and

7781

ELEMENT	% RECOVERY OF SPIKE	AMOUNT OF SPIKE mg/l	SAMPLE SPIKED
ANTIMONY	72	1.00	91-EFL-7
BERYLLIUM	91	1.00	91-EFL-7
THALLIUM	71	1.00	91-EFL-7

Environmental Resource Associates WasteWatR Quality Control Standard Reference, Lot No. 9938

С	ertified Value mg/l	Value found mg/l	% Recovery
ANTIMONY	0.108	0.103	95
BERYLLIUM	0.097	0.104	107
THALLIUM	0.095	0.094	99

Laboratory Director



# Certification WasteWatR™ Quality Control Standards

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	LOT NO. 9938 Certified Value	2
Parameter	Certified Value	Advisory Range <sup>2</sup>
MINERALS WasteWateTM	mg/l	mg/l
total solids at 105°C	902	785-1020
dissolved solids at 180°C	902	785-1020
conductivity at 25°C	1050 micromhos	892-1210 micromhos
alkalinity	203	180-225
chloride	95.4	88-102
fluoride	3.53	3.0-4.1
sulfate	138	119-157
potassium	120	102-138
sodium	156	132-179
рН	9.1 S.U.	8.9-9.3 S.U.
HARDNESS WasteWatk TM	mg/l	mg/l
suspended solids at 105°C	39.4	33-45
calcium	100	86-122
magnesium	19.5	17-22
hardness as CeCO2	330	284 - 376
•		20.0.0
GREASE & OIL WasteWatR <sup>TM</sup>		
Gravimetric	44.2 mg/bottle	33-55 mg/bottle
Infrared	53.0 mg/bottle	39-66 mg/bottle
	JJ.O IIIg/ Doctor	, 55 mg, 55ttte
DEMAND WasteWatR <sup>TM</sup>	mg/l	mg/l
BOD	30.5	20-38
COD	50.9	43-58
TOC	19.8	17-23
total phosphorus as P	4.41	. 3.8-5.1
Kjeldahl nitrogen as N	2.19	1.8-2.6
Kjetdant mitrogen as w	2.19	1.6-2.6
NUTRIENTS WasteWatR <sup>TM</sup>	ing/l	ing/L
ammonia as N	6.76	5.6-7.8
nitrate plus nitrite as N	10.8	9.6-12
phosphate as P	12.7	10-15
prospriete as r	12.1	10 15
	mg/l	mg/l
CYANIDE WasteWatR <sup>TM</sup>	0.453	. 0.33-0.58
& PHENOL	0.181	0.14-0.22
	57,57	
	mg/l	mg/l
RESIDUAL CHLORINE WasteWatR <sup>TM</sup>	1.18	0.88-1.4
TRACE METALS WasteWatR <sup>TM</sup>	μg/l	μg/l
aluminum	418	343-493
antimony	108	81-127
arsenic	92.7	70-109
barium	223	183-263
beryilium	97.2	80-115
boron	200	164 - 236
cadmium	113	92-133
chromium	141	115-166
cobalt	212	174-250
copper	115	94-136
iron	327	268-386
lead	170	139-201
manganese	166	136-196
mercury	1.94	1.4-2.4
molybdenum	212	174-250
nickel	175	144-206
selenium	103	77-122
silver	91.8	75-108
strontium	249	204 - 294
thallium	95.0	71-112
vanadium	148	121 - 175
zinc	234	192-276

<sup>&</sup>lt;sup>1</sup>Certified values are equal to 100% of each parameter in the indicated standard.

<sup>&</sup>lt;sup>2</sup>Advisory ranges are listed as guidelines for acceptable recoveries given the limitations of the EPA methodologies commonly used to determine these parameters. The range closely approximates the 95% confidence interval for these parameters based upon the experimental data generated by ERA and data from the USEPA WP, WS and CLP interlaboratory performance evaluation programs.

#### TENTATIVELY IDENTIFIED COMPOUNDS -----

Anametrix ID : 2CB0628C01
Analyst : Lw
Supervisor : H

Project ID

Sample ID

Matrix

Date Sampled

Date Extracted

Amount Extracted

Date Analyzed

Instrument ID

BLANK

BLANK

0/ 0/ 0

6/28/91

1000.0 mL

6/29/91

F2

Dilution Factor: 1.00

Conc. Units : ug/L

### | TENTATIVELY IDENTIFIED COMPOUNDS | -----

Project ID : MOA
Sample ID : 91-EFL-1
Matrix : WATER

Date Sampled : 6/25/91
Date Analyzed : 7/09/91
Instrument ID : MSD1

Anametrix ID : 9106298-02

: DP Analyst Supervisor

1		DEDODMENT	DOMEN'S COL	
CAS NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
1. 622-96-8 2. 95-63-6 3. 108-67-8 4	BENZENE, 1-ETHYL-4-METHYL BENZENE, 1,2,4-TRIMETHYL BENZENE, 1,3,5-TRIMETHYL UNKNOWN	0. 0. 0.	13. 13. 14.	J J J
5. 6. 7.				
9. 10.				
12. 13. 14.				
15. 16. 17.				
18. 19. 20. 21.				
22.				
25. 26. 27.				
28. 29. 30.				

### TENTATIVELY IDENTIFIED COMPOUNDS

Project ID : MOA
Sample ID : 91-EFL-1
Matrix : WATER
Date Sampled : 6/25/91
Date Extracted : 6/28/91 Amount Extracted: 800.0 mL
Date Analyzed: 6/30/91
Instrument ID: F2

Anametrix ID : 9106298-02

: LW Analyst Supervisor

CAS NUMBER	. COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
4. 134-62-3 5. 57-10-3 6 7. 123-79-5	UNKNOWN CAPROLACTAM BENZAMIDE, N,N-DIETHYL-3-MET HEXADECANOIC ACID UNKNOWN HEXANEDIOIC ACID, DIOCTYL ES UNKNOWN CHOLEST-7-EN-3-OL, (3.BETA., UNKNOWN		100. 300. 30. 40. 100. 90. 400. 100. 200. 200.	J J J J J B J J J

### | TENTATIVELY IDENTIFIED COMPOUNDS | -----

Project ID : MOA
Sample ID : 91-INF-1
Matrix : WATER

Anametrix ID : 9106298-01

: 20

Date Sampled Date Analyzed

: 6/25/91 : 7/09/91

: W

Analyst

Supervisor

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Ι	n	st	rum	en	t	I	D	:

MSD1

CAS NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
1. 622-96-8 2. 526-73-8 3. 611-14-3 4. 108-67-8 5. 5989-27-5 6. 629-50-5 7. 1120-21-4 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	BENZENE, 1-ETHYL-4-METHYL BENZENE, 1,2,3-TRIMETHYL BENZENE, 1-ETHYL-2-METHYL BENZENE, 1,3,5-TRIMETHYL D-LIMONENE TRIDECANE UNDECANE	0. 0. 0. 0. 0. 0. 0.	28. 27. 12. 27. 15. 10.	Q J J J J J
30.				

#### TENTATIVELY IDENTIFIED COMPOUNDS |

Project ID Sample ID

: MOA : 91-INF-1

Matrix : WATER
Date Sampled : 6/25/91
Date Extracted : 6/28/91
Amount Extracted : 770.0 mL
Date Analyzed : 6/30/91
Instrument ID : F2

Anametrix ID : 9106298-01 Analyst : Lt.

Supervisor : W

Dilution Factor: 1.00

Conc. Units : ug/L

		DEDODMING	DCMTW MPD	
CAS NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
3. 544-63-8 4. 57-10-3 5	UNKNOWN 3-CYCLOHEXENE-1-METHANOL, .A TETRADECANOIC ACID	0	100. 100. 60. 200. 300. 100. 100. 100. 100.	J J J J J J J

### TENTATIVELY IDENTIFIED COMPOUNDS | -----

Project ID Sample ID

Project ID : MOA
Sample ID : 91-SLU-1
Matrix : SLUDGE
Date Sampled : 6/25/91
Date Analyzed : 7/09/91
Instrument ID : MSD1

Anametrix ID : 9106298-03 Analyst : 90

Analyst : 90 Supervisor : U

Dilution Factor: 1.00

Conc. Units : ug/Kg

		REPORTING	ECMTMA CO	
CAS NUMBER	COMPOUND NAME	LIMIT	ESTIMATED CONC.	Q
1.	UNKNOWN UNKNOWN BENZENE, 1-ETHYL-3-METHYL OCTANE, 2,3,6-TRIMETHYL- BENZENE, 1,3,5-TRIMETHYL BENZENE, 1,2,3-TRIMETHYL D-LIMONENE UNKNOWN UNKNOWN UNKNOWN UNDECANE		10. 5. 32. 100. 30. 35. 130. 23. 57.	

### TENTATIVELY IDENTIFIED COMPOUNDS |

Project ID

Anametrix ID

: 3CB0708C01

Sample ID

: BLANK

Matrix

è

: SOIL

Analyst Supervisor

Date Sampled : 0/0/0
Date Extracted : 7/8/91
Amount Extracted : 30.0 g

Dilution Factor: 1.00

Date Analyzed : 7/10/91
Instrument ID : F3

Conc. Units : ug/Kg

CAS NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
1.	UNKNOWN UNKNOWN UNKNOWN HEXANEDIOIC ACID, DIOCTYL ES	0. 0. 0. 0. 0.	600. 4000. 300. 200. 300.	J J J J
22.	-			
24. 25. 26.				
27. 28. 29.				

### TENTATIVELY IDENTIFIED COMPOUNDS

Project ID : MOA Sample ID : 91-SLU-1

Anametrix ID Analyst

Supervisor

: 9106298-03

Dilution Factor: 5.00

Matrix : SLUDGE
Date Sampled : 6/25/91
Date Extracted : 7/8/91
Amount Extracted : 30.0 g
Date Analyzed : 7/12/91
Instrument ID : F3

Conc. Units : ug/Kg

CAS NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
2. 103-82-2 3. 143-07-7 4. 544-63-8 5. 1002-84-2	DODECANOIC ACID TETRADECANOIC ACID PENTADECANOIC ACID 9-HEXADECENOIC ACID UNKNOWN ACID UNKNOWN HYDROCARBON		2000. 3000. 6000. 20000. 4000. 10000. 10000. 10000.	לממממממממ

### TENTATIVELY IDENTIFIED COMPOUNDS | \_\_\_\_\_

Project ID Sample ID : 526.01 : 91-SLU-5 Matrix

: SLUDGE

Date Sampled : 8/8/91
Date Analyzed : 8/21/91
Instrument ID : MSD1

Anametrix ID : 9108097-05 Analyst : MS Supervisor : PG

CAS NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
1. 52078-56-5 2. 4923-77-7 3. 696-29-7 4. 611-14-3 50 6. 526-73-8 7. 5989-27-5 8. 91-17-8 9. 1120-21-4	11-Tricosene Cyclohexane, 1-ethyl-2-methy Cyclohexane, (1-methylethyl) Benzene, 1-ethyl-2-methyl- Unknown hydrocarbon Benzene, 1,2,3-trimethyl- D-Limonene Naphthalene, decahydro-			Q J J J J J J J J
28.				

### TENTATIVELY IDENTIFIED COMPOUNDS |

Project ID Sample ID

: 526.01

: 91-SLU-5

Anametrix ID

**: 9108097-**05

Analyst

Matrix

: SOIL

Supervisor

Date Sampled : 8/8/91 Date Extracted : 8/13/91

Amount Extracted: 30.0 g

Dilution Factor: 10.00

Conc. Units : ug/Kg

Date Analyzed : 8/26/91
Instrument ID : F3

CAS NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
1.	UNKNOWN		40000. 300000. 90000. 100000. 60000. 30000. 40000.	J J J J J J

### | TENTATIVELY IDENTIFIED COMPOUNDS | ------

Project ID : 526.01 Sample ID : 91-EFL-9 Matrix : WATER

Date Sampled : 8/8/91
Date Analyzed : 8/21/91
Instrument ID : MSD1

Anametrix ID : 9108097-02 Analyst : MCT Supervisor : pq

CAS	NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
1. 2. 3. 4. 5.	0 3913-02-8 622-96-8 	Unknown 1-Octanol, 2-butyl- Benzene, 1-ethyl-4-methyl- Unknown hydrocarbon	0. 0. 0. 0.	6. 10. 5. 7.	J J J J
7					
14. 15. 16. 17. 18. 19.					
21. 22. 23. 24. 25.					
27. 28. 29. 30.					

### TENTATIVELY IDENTIFIED COMPOUNDS |

Project ID Sample ID

: 526.01 : 91-EFL-1

Anametrix ID : 9108097-04 Analyst

: LW

Matrix : WATER
Date Sampled : 8/8/91
Date Extracted : 8/13/91 Amount Extracted: 860.0 mL

: PG Supervisor

Date Analyzed : 8/26/91 Instrument ID : F3

Dilution Factor: 1.00

Conc. Units : ug/L

### TENTATIVELY IDENTIFIED COMPOUNDS |

Project ID Sample ID

: 526.01 : 91-INF-9

Matrix Date Sampled

: WATER

Date Sampled : 8/8/91
Date Analyzed : 8/21/91
Instrument ID : MSD1

Anametrix ID : 9108097-01

Analyst

: MCT

Supervisor

: PG

Dilution Factor: 2.00

conc.	Units	: 1	ug/L
REPORTIN	NG ESTI	MATTE	D

CAS NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
1. 3913-02-8 2. 629-50-5 3. 4. 5.	1-Octanol, 2-butyl	0.	10.	J
6. 7. 8.				
10. 11. 12. 13.				
15. 16. 17.				
19. 20. 21. 22. 23.				
24. 25. 26. 27.				
28.				

### TENTATIVELY IDENTIFIED COMPOUNDS | -----

Project ID Sample ID

: 526.01 : 91-INF-1

Matrix : WATER
Date Sampled : 8/8/91
Date Extracted : 8/13/91
Amount Extracted : 940.0 mL
Date Analyzed : 8/26/91
Instrument ID : F3

Dilution Factor: 1.00

Conc. Units : ug/L

Anametrix ID : 9108097-03
Analyst : W
Supervisor : PG

		NUMBER	COMPOUND NAME	REPORTING LIMIT	ESTIMATED CONC.	Q
1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2	1. 2. 3. 4. 5. 6. 7. 8. 9. 0. 1. 2. 3. 4. 9. 0. 1. 2. 3. 4. 5. 6. 7. 8. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	124-17-4 143-07-7 544-63-8 57-10-3 	UNKNOWN UNKNOWN ALCOHOL ETHANOL, 2-(2-BUTOXYETHOXY)- DODECANOIC ACID TETRADECANOIC ACID HEXADECANOIC ACID UNKNOWN OCTADECANOIC ACID UNKNOWN UNKNOWN UNKNOWN		50. 200. 30. 20. 20. 70. 80. 80. 30. 40.	